



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

December 13, 1995

Daniel Gillingham, Regulatory Compliance Manager
Franklin Environmental Services, Inc.
Transportation Programs
185 Industrial Road
P.O. Box 617
Wrentham, MA 02093

Re: LDR Notification Requirements

Dear Mr. Gillingham:

This is in response to your letter dated October 26, 1995, requesting EPA's position on the proper language for Land Disposal Restriction forms where shipments of hazardous wastes destined for CWA/CWA equivalent/Class I facilities are initially transported to a non CWA/CWA equivalent/Class I transfer facility. You state that a "common problem" occurs when a generator manifests LDR waste off-site to a transfer facility that, in turn, ships the waste off-site to a CWA/CWA equivalent facility for ultimate disposal.

Based on the information contained in your letter, there does not appear to be any regulatory issue in this matter. It is clear to me that the first facility is not acting as a transfer facility and is signing the designated facility portion of the manifest as the TSDF. As such, the non-CWA language sent by the initial generator is appropriate and the generator of the initial manifest has met his obligations. Also, the transfer facility upon signing the manifest as the "Designated Facility" in Item 9, effectively terminates the shipment at that point. Any subsequent shipment involving this waste would require the TSDF to prepare and sign a new manifest as the generator and would also require the TSDF to identify the appropriate LDR language for the next receiving facility (CWA/CWA equivalent for your example).

If, as you suggest, the first facility was acting in the capacity of a transfer facility (i.e. less than ten days) and not a TSDF, the LDR notice would not be an issue because the facility would only be completing Item 7 of the hazardous waste manifest and signing as a continuing transporter. This type of transfer does not complete the shipment, would not terminate the manifest and would allow the LDR CWA/CWA equivalent language on the LDR Notice since the CWA/CWA equivalent facility would be the designated facility that completes the manifest and terminates the shipment.



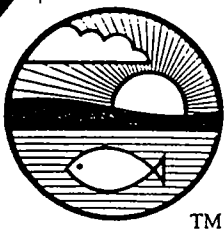
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If you have any further questions regarding this matter, please contact me at (617) 565-3349.

Sincerely,

A handwritten signature in cursive script that reads "Kenneth B. Rota". The signature is written in dark ink and is positioned above the typed name.

Kenneth B. Rota, Environmental Protection Specialist
RCRA Enforcement Unit



**Franklin
Environmental
Services, Inc.**

185 Industrial Road
P.O. Box 617
Wrentham, MA 02093
TEL. 508-384-6151
FAX 508-384-6028

Ken Rata
Licensed and Permitted in the
United States and Canada
FED. EPA ID #MADO84814136

ENVIRONMENTAL SERVICE PROFESSIONALS

October 26, 1995

Mr. Frank Ciavattieri
Waste Management Division
USEPA, Region 1
JFK Federal Building, Room 2203
Boston, MA 02203

Dear Mr. Ciavattieri:

I am requesting Region I's interpretation of LDR notification requirements when shipping to transfer facilities. Franklin Environmental Services, Inc. is an environmental contractor and transportation company in Massachusetts that frequently is requested by our customers/generators to offer them assistance in regulatory questions such as this item.

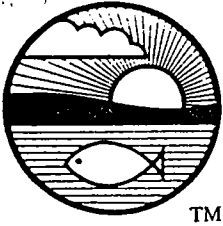
Several of the LDR regulations, such as treatment standards and additional required language are contingent on whether a certain waste is managed in a non-CWA/non-CWA equivalent/non-Class I SDWA system only. A common situation arises when we transport waste to a TSDF that is not a CWA/CWA equivalent/Class I facility itself but ships the waste to a TSDF that is. Since the ultimate disposal will occur at a CWA/CWA equivalent/Class I SDWA facility, is the generator in the first shipment (to a non CWA/CWA equivalent/Class I facility) required to submit LDR notifications that comply with the non CWA or CWA requirements?

I would request that you reply to this letter in a written correspondence; please cite any references to the regulations or OSWER Directives that have any bearing on this situation.

Thank you in advance for your cooperation and timely reply to this request.

Sincerely,

Daniel Gillingham
Regulatory Compliance Manager



**Franklin
Environmental
Services, Inc.**

185 Industrial Road
P.O. Box 617
Wrentham, MA 02093
TEL. 508-384-6151
FAX 508-384-6028

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Thank you in advance for your cooperation and timely reply to this request.

Sincerely,

Daniel Gillingham
Regulatory Compliance Manager



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

August 21, 1995

Mr. Thomas Andrews
New Hampshire Department of Environmental Services
Waste Management Division
6 Hazen Drive
Concord, NH 03301-6509

Dear Mr. Andrews:

Thank you for your telephone call requesting a determination regarding the metals precipitated from the groundwater at the Keefe Environmental Services Site in Epping, NH. You stated that the metals are the naturally occurring minerals in the groundwater. Specifically, you wanted to know if this waste stream (metals) could be disposed of as a solid waste. You stated that by using sodium hydroxide, the metals are precipitated out of groundwater in order to make the groundwater more amenable to treatment via air stripping.

Historically, contamination at the site was due to the transportation and storage of hazardous waste (i.e., Trichloroethylene, Tetrachloroethane, Dichloroethane, Benzene, and 1,1 Dichloroethylene). Based on the TCLP analysis, there were no volatile or semi-volatile constituents detected in the metals that were precipitated out of the groundwater. Also, the TCLP for these metals was well below regulatory limits.

Generally, residue (e.g., precipitated metals) from the treatment of a listed hazardous waste is also a listed hazardous waste. However, in this case the precipitated metals are derived from environmental media (e.g., groundwater) that contain a listed hazardous waste. If the precipitated metals do not contain any constituents of the listed hazardous waste, it is not considered to be a hazardous waste.

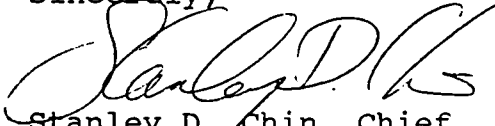
However, the high metals content in a waste stream has been known to mask TCLP results. It is recommended that a totals analysis be done to determine if any of the listed constituents of



concern are contained in the precipitated metals. If any hazardous constituents of concern are present, then the State of New Hampshire may make a determination as to whether the concentrations of these constituents pose a threat to human health and the environment.

If you have any questions regarding this matter, please do not hesitate to call Mel R. Cheeks at 617-223-5590.

Sincerely,

A handwritten signature in black ink, appearing to read "Stanley D. Chin", written in a cursive style.

Stanley D. Chin, Chief
RCRA Support Section

June (6), 1995

A. A. Brunell Electroplating Corp
Jonathan Brunell, President
41 Sutton Lane
Worcester, MA 01603

Dear Mr. Brunell:

This letter is in reponse to your inquiries of April 20 and May 3, 1995. In both instances, your primary concern was directed toward regulation of the metal hydroxide sludge.

As you stated, your company employs three electroplating processes: 1) an acid-zinc on carbon steel electroplating process 2) a passivation of stainless steel process and 3) a phosphate on carbon steel process. In addition, a post plating treatment of "Ebonol Z-80" which contains an isocyanate compound had been used, but has been discontinued. Based on this information, EPA has made the following determinations:

- 1) The wastewater treatment sludge resulting from the acid-zinc electroplating on carbon steel is specifically exempt from the F006 hazardous waste designation, as set out at 40 CFR 261.31.
- 2) With regard to the Ebonol Z-80 treatment process, this cyanide based compound would produce a hazardous sludge. However, as you stipulated in the letter of May 3, the Ebonol Z-80 process has been discontinued and you certified that cyanide will never be present in the metal sludge. Based on the certification, your sludge should not be hazardous from a cyanide viewpoint.
- 3) Lastly, the passivation and phosphate processes which you described in a faxed letter (5/24/95) are acid-related treatments to ferric and stainless steel finished products. The wastewater generated by these processes is adequately treated by your treatment system and discharged to the local POTW. It was also determined that these treatment processes are not listed specifically in any of the solid hazardous waste categories. As a result, you should rely on TCLP test data to determine if your sludge has any toxicity characteristics. Based on EPA's review of your submittal, it was determined that no toxic constituents were present in the metal hydroxide sludge sample analyzed.

In conclusion, it appears that the metal hydroxide sludge generated at your facility is not classified as a RCRA hazardous waste and is not subject to the respective regulations. However, you are reminded that Massachusetts DEP is authorized for base program implementation of RCRA and such they may have state regulations which are more stringent than EPA. It is strongly recommended that you contact them for further guidance regarding

this matter. If you have any questions regarding this determination, please contact Tom Murphy of my staff at 617-223-5522.

Sincerely,

Gary B. Gosbee PE, Chief
Permits and State Programs Section

CC: MADEP Bill Sirull



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

JOHN F. KENNEDY FEDERAL BUILDING
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS 02203-2211

May 10, 1995

Mr. David Nash
Waste Enforcement and Engineering Division
Waste Management Bureau
Department of Environmental Protection
79 Elm Street
P.O. Box 5066
Hartford, Connecticut 06102-5066

EPA I.D. No. CTD001147495

Re: Pfizer Request for Release of Treated Tank Vault Soils from
RCRA Subtitle C Management Requirements.

Dear Mr. Nash:

We have received a request from Pfizer Incorporated to release from RCRA Subtitle C management requirements certain soils contaminated by listed hazardous wastes from above ground tank vaults and subsequently treated on-site using vacuum extraction (these soils are hereafter referred to as the "tank vault soils"). Pfizer has requested that we apply the "contained-in" policy to make this release.

We have determined that although the tank vault soils no longer "contain" hazardous wastes at levels that pose unacceptable risks to human health and the environment, the presence of other non-hazardous waste derived contaminants necessitate specific management controls. The purpose of this letter is to provide our recommendation for applying the current "contained in" policy to the Pfizer situation and to inform you of our views for the proper management of the treated tank vault soils. Specifically, this letter: (1) discusses our interpretation of the "contained-in" policy as it pertains to Pfizer's situation, (2) compares the hazardous constituents present in the treated tank vault soils to acceptable risk levels, (3) provides considerations for management options, and (4) expresses our views on Pfizer's proposed management control option for the treated tank vault soils.

"Contained-In" Policy

The contained in policy involves a determination as to whether media contaminated with listed hazardous wastes, and subsequently treated to remove such wastes, no longer exhibit concentration levels which would warrant continued management under RCRA Subtitle C. Media can be contaminated by hazardous constituents that are: (1) derived from solid wastes which are also listed or



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characteristic hazardous wastes, (2) derived from solid wastes which are neither listed nor characteristic hazardous wastes, (3) derived from materials which are not solid wastes, or (4) a combination of any of the above.

The management options available for media that contain constituents derived from hazardous wastes within their media matrix at levels above those deemed protective of human health and the environment is limited to those within the scope of the RCRA Subtitle C base program¹. A broader range of management options is available for soils that contain only hazardous constituents that are not derived from hazardous wastes; that is, a situation which does not implicate the contained in policy because the media does not contain a hazardous waste. The decision for managing media in the latter example can be made on a case-by-case basis (e.g., under a RCRA Corrective Action authority) so long as human health and the environment are protected. Unrestricted use of media may be allowed upon a finding that the media would not pose unacceptable risks to human or ecological receptors.

Comparison to Acceptable Risk Levels

A report characterizing the contaminant concentrations in the treated tank vault soil was prepared by Recra Environmental Inc. and submitted to our office in June 1993. Supplementary soil characterization information has been provided by Pfizer since that time. A list of possible hazardous constituents that could have been released into the tank vault soils was provided to us on March 31, 1995.

The analytical data submitted indicates that highest post-treatment VOC concentrations in the tank vault soils were below 20 ppb. A concentration of 0.019 ppm total xylenes was the highest reported for the seven VOC constituents detected, with approximately 27 grab samples collected per constituent. Highest post-treatment metals concentrations included 3.0 ppm Arsenic, 64.8 ppm Lead, 15.8 ppm Nickel, 13.3 ppm Chromium, 1.2 ppm Cadmium, and 45.5 ppm Copper. Maximum post-treatment semi-volatile concentrations included 14 ppm (estimated) Benzo(a)anthracene, 12 ppm (estimated) Benzo(b)fluoranthene, 9.9 ppm (estimated) Benzo(a)pyrene, 5.0 ppm Indeno(1,2,3)pyrene, and 1.1 ppm Dibenz(a,h,)anthracene.

The concentrations of hazardous waste-derived constituents were compared to human health risk-based concentrations. Hazardous waste derived constituents were not compared to ecological risk-

¹ "Base program" as used here means the regulations promulgated pursuant to the RCRA statutes prior to the Hazardous and Solid Waste Amendments of 1984.

based concentrations because information is not available to assess all of the potential ecosystems and pathways corresponding to locations at which the soils could eventually be placed. The primary hazardous waste-derived constituents of concern in the Pfizer treated tank vault soils are VOCs in general, with xylene being the VOC constituent of greatest concern. The post-treatment concentration of xylene is less than the human health concentration of concern for a default residential scenario.² As a result, the treated tank vault soils are determined not to "contain" hazardous wastes at concentrations that pose unacceptable risks and are therefore exempt from management under the RCRA base program.

Each of the maximum semi-volatile concentrations cited above exceed the 10^{-6} carcinogenic risk level point of departure for a residential scenario, some by over an order of magnitude. Our review also indicates that the maximum reported concentrations for arsenic and the semi-volatiles are in exceedance of the 10^{-6} risk-based concentrations for human industrial exposures, although generally by less than an order of magnitude³. In summary, our review of Pfizer's analytical data indicates that these soils contain constituent levels which exceed acceptable human health exposure concentrations for residential soil. Therefore, we conclude that these soils should not be granted unrestricted management status. Again, ecological impacts were not considered as the analysis would be site-specific.

Considerations for Developing Management Options

Although it is our opinion that the treated tank vault soils do not fall under the jurisdiction of the RCRA base program, the presence of hazardous constituents above human health-based levels necessitates consideration of the relevant and appropriate aspects of the RCRA base program and the applicable aspects of the RCRA Corrective Action program when management options are being considered. Human health pathways and routes, fate and transport, and ecological pathways should be considered in the management option analysis.

An industrial exposure scenario for incidental human exposures would be considered an appropriate approach to assessing human pathways and routes. If incidental ingestion were not an operable pathway, then there would be some discretion in determining that these soils were acceptable for some management option consistent with unlikely ingestion exposure. The likely management option for non-liquid, contaminated media would be management in a

² Risk-Based Concentration Table, Third Quarter 1994 , Roy L. Smith, Ph.D., U.S. EPA - Region III).

³ Id.

landfill or other managed disposal facility. The drinking water pathway should also be considered in this situation if deemed appropriate (e.g., actual or potential downgradient wells).

Site-specific contaminant fate and transport could consider by analogy the Land Disposal Restrictions Universal Treatment Standards (UTS).⁴ The UTS are maximum concentrations for any single grab sample of waste that must be met prior to any land disposal of such waste. The UTS are mandated to reflect standards which minimize short-term and long-term threats to human health and the environment from the waste⁵. The only exception to this land disposal prohibition for wastes with one or more grab sample concentrations in excess of a UTS is the disposal of the waste in a facility with an approved "No Migration" demonstration. A comparison of Pfizer's analytical data with the UTS indicate that all of the semi-volatile constituents identified above, with the exception of Dibenz(a,h,)anthracene, are in exceedence of the applicable UTS. Therefore, if this material were a hazardous waste, it would be prohibited from any land disposal, except in a No-Migration unit, without further treatment to meet the UTS. The Agency recognizes, however, that media such as soil is not always amenable to treatment technologies suitable for waste materials.⁶

The operative ecological pathways would depend on whether the materials were incorporated as fill or used as cover material. If used as cover material, consideration of exposure to burrowing animals, or to grazing animals through consumption of vegetative cover and subsequent food-chain transfers would seem appropriate. These pathways would not likely be operative if the material was incorporated as fill rather than used as cover material. Subsequent leaching of the constituents of concern into groundwater and/or surface waters and the resulting potential ecological exposures/impacts should also be considered.

Pfizer's Proposed Management Control Option

Pfizer recently submitted a possible on-site alternative for disposition of the treated tank vault soils. This alternative is outlined in the attached correspondence from Richard M. Davis, Pfizer to David Guest, EPA-New England, dated March 22, 1995. Briefly, the alternative involves using the treated tank vault

⁴ Land Disposal Restrictions Phase II: Final Rule (59 FR 47982, Sept. 19, 1994)

⁵ 42 U.S.C. § 6924(m)(1)

⁶ 59 FR at 47986

soils as subgrade for a proposed parking area which will be paved with asphalt.

We encourage the beneficial reuse of such materials in a way not posing any adverse risk to human health or the environment. We believe that this alternative would be acceptable given that the asphalt surface will likely eliminate any incidental ingestion pathway and significantly reduce leaching of the residual constituents. Therefore, potential human or ecological exposures would likely be minimal. Note that the surrounding area is served by town water.

We strongly recommend conditioning the use of the treated tank vault soil as parking lot subgrade material upon Pfizer identifying this area as a Solid Waste Management Unit (SWMU) subject to RCRA Corrective Action. This SWMU designation will allow for a more site-specific review of the propriety of this disposition when any future Corrective Action activities occur at the facility.

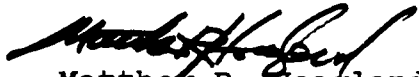
Conclusion

In our opinion the treated tank vault soils contain hazardous constituents derived from both hazardous wastes and non-hazardous solid wastes. The concentrations of hazardous waste-derived constituents when considered alone are determined to be at levels that do not pose an unacceptable risk to human health and the environment. This fact relieves Pfizer from the requirement of managing the tank vault soils only in accordance with RCRA base program. However, the concentrations of remaining non-hazardous waste-derived constituents that remain in the treated tank vault soils necessitates consideration of relevant and appropriate RCRA base program requirements and the applicable RCRA Corrective Action requirements when considering management options.

Pfizer's proposed beneficial reuse of the treated tank vault soils beneath an asphalt surface is viewed as an acceptable short-term alternative so long as the area of tank vault soil depositional area is designated as a Solid Waste Management Unit. The final decision regarding the disposition of these soils should be a component of a Corrective Action final remedy decision and comply with State laws.

Should you have any questions regarding this matter, please feel free to contact me at 617/573-5791.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew R. Hoagland".

Matthew R. Hoagland, Chief,
Corrective Action Section

ATTACHMENT

cc: Richard M. Davis, Pfizer



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

MAY 9 1995

Vincent F. Hock, Metallurgist
U.S. Army Corps of Engineers
Construction Engineering Research Laboratories
P.O. Box 9005
Champaign, IL 61826-9005

Dear Mr. Hock:

This letter is in response to our recent telephone call regarding the use the product Blastox® as an additive in shot blast for the purpose of stabilizing metal contaminants. As I stated during our conversation, Curt Gustafson and Red Clark of The TDJ Group, Inc. (manufacturer of Blastox®) also telephoned me concerning the use of Blastox®. Specifically, the issue raised was whether or not this product was considered a "masking agent" and interfered with the Toxicity Characteristic Leaching Procedure (TCLP) used by EPA to determine if a solid waste is also a hazardous waste. Both Mr. Gustafson and Mr. Clark stated that, in their opinions, Blastox® was a legitimate abrasive additive.

As I understand the situation, you, Mr. Gustafson and Mr. Clark would like EPA to make a determination as to whether the use of this product is legitimate with the intent of using EPA's interpretation on a national basis. Due to the scope of this determination, I feel that EPA Headquarters in Washington D.C. is the most appropriate source to address this issue. During my conversations with you, Mr. Gustafson and Mr. Clark, a number of legal and technical issues were identified that need to be addressed by EPA Headquarters.

First, Blastox® does not appear to greatly enhance the sandblasting process nor is this sandblasting process dependent upon the use of this product. Despite its abrasive properties, the reason for adding this material, as I understand it, is specifically to treat sandblast waste, that would be otherwise hazardous by not using this product. I would expect EPA Headquarters to definitively address the issue of whether or not the addition of Blastox® prior to the sandblasting process constitutes hazardous waste treatment. Although no waste is actually generated, the purpose and intent of adding this material is to treat metal-contaminated sandblast waste prior to generating the waste to specifically render the waste non-hazardous (as determined by the Toxicity Characteristic Leaching Procedure (TCLP)).

During our conversation, you stated that Blastox® chemically stabilized the sandblast waste and had properties similar to Portland cement. You also stated that, like Portland cement, water must be added to start the reaction and cause the resultant



sandblast and Blastox® mix to stabilize. My conversations with Red Clark and Curt Gustafson, of The TDJ Group, Inc. also determined that Blastox® is a heavily buffered material. As a buffered material that requires water to complete the fixation process, I cannot determine with any reasonable certainty whether Blastox®, in its dry form, actually stabilizes the sandblast waste or, because of the buffered compounds, masks the TCLP test.

Mr. Clark stated that, in his opinion, the stabilization/fixation process occurs from the use of Blastox® in the dry state. However, Mr. Clark, like myself, is aware that the TCLP test uses water as part of the testing procedure. As such, a determination as to whether or not stabilization actually occurs in a dry form may not be possible since the water used to conduct the TCLP test may actually cause the Blastox® and sandblast waste to stabilize during the testing process. If stabilization is determined not to occur in the dry state, the addition of water after the sandblasting process would clearly constitute hazardous waste treatment. A determination as to whether the stabilization process occurs in a dry state is critical to determine the regulatory status for the use of this product.

My review of the Demonstration Project conducted by the Army Corps of Engineers found that Blastox® was used in a "dry" form during the sand-blasting process. As you may know, there is no legal obligation to add water to the sandblast and Blastox® waste mixture after use if a sample of the mixture passes the TCLP test. Therefore, if stabilization does not occur in a dry form, the TCLP test results may not be indicative of the actual hazards posed from the dry disposal of this material. Again, there is no assurance that this waste would be wetted down prior to disposal. As you are probably aware, Subtitle D disposal fees are usually based upon weight and would be a further disincentive to adding water (~8.5 lbs/gal) to this material since it would increase both the weight and disposal costs.

Since this issue appears to concern matters beyond ordinary testing of the waste, I contacted EPA Headquarters in Washington, D.C. and was informed that the Waste Treatment Branch was the appropriate section within the Agency to respond to your request for an interpretation. As such, the Region will defer any final interpretations concerning the use and disposal of this material to the Waste Treatment Branch. I will forward a copy of your reports to Richard Kinch, the Chief of this Branch. To initiate a formal request for interpretation, a letter should be written and sent to EPA Headquarters. These letters are recorded and tracked. Mr. Kinch's telephone number is (703) 308-8434.

I appreciated the opportunity to discuss this issue with you. The final decision of Headquarters will be of national significance since other Department of Defense facilities have contacted me and are also considering the use of this product for lead abatement activities at federal facilities throughout the country.

Sincerely,

Kenneth B. Rota

Kenneth B. Rota, Environmental Protection Specialist
RCRA Support Section
EPA-New England Region

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MA 02203-2211

MEMORANDUM

DATE: May 9, 1995

UBJ: Sand Blast Additive (Treatment Interpretation)

FROM: Kenneth B. Rota, Environmental Protection Specialist *KBR*
RCRA Support Section
Region I

TO: Richard Kinch, Chief
Waste Treatment Residuals Branch

This memo is a "heads-up" regarding the use of a sandblast additive known as Blastox®. I have enclosed two reports submitted to me by the Army Corps of Engineers Research Laboratory located in Champaign, Illinois. The reports document a two year Army Corps study of Blastox®, a silicate-based sandblast additive. Blastox® was used in a removal/chemical fixation study by the Army Corps. The Army Corps verbally requested an opinion as to whether the use of this product in the sandblast grit is legitimate or is considered "treatment." If the additive is not considered treatment prior to use, the Army Corp also requested an interpretation as to whether the addition of water, after the sandblasting process, is considered treatment.

The product is silicate-based material that appears to have buffering capacity available. I have included my initial response to the Army Corps of Engineer for your information. My letter raised a number of issues and concerns that I have about this product. Since the waste generated by this type of process is generally not listed, it would appear that the TCLP test would be the main indicator of whether the Blastox® and sandblast grit mixture is hazardous. The fact that the additive is buffered is not a consideration in the TCLP test (despite using the more aggressive extract) and would enhance the ability of sandblast grit to pass the TCLP test.

My understanding is that if the regulatory status of the use of this product is favorable, DoD is prepared to gear up for a major lead removal initiative that is problematic at federal facilities.

My direct telephone number is (617) 573-5759 if you have any questions. OSW referred this issue to your program.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CONSTRUCTION ENGINEERING RESEARCH LABORATORIES, CORPS OF ENGINEERS
P.O. BOX 9005
CHAMPAIGN, ILLINOIS 61826-9005

May 26, 1995



Materials Science & Technology Division

U.S. Environmental Protection Agency
Mr. Richard Kinch, Chief
Waste Treatment Branch
401 M Street, S.W.
Mail Code 5302W
Washington, DC 20460

Dear Mr. Kinch:

Reference correspondence from Mr. Kenneth B. Rota, U.S. EPA New England Region, to the undersigned, dated May 9, 1995.

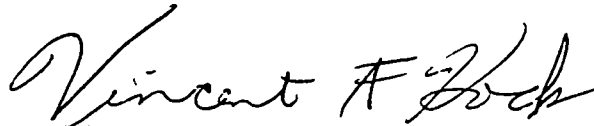
As explained in the attached correspondence, our office has investigated a proprietary product, Blastox[®], which chemically stabilizes debris generated during the abrasive blast removal of lead-based paint. Blastox[®] is a dry granular material that has a chemical composition and properties similar to portland cement. It is added to traditional sandblast abrasives at a rate of 20 to 25% by weight. The U.S. Army Construction Engineering Research Laboratories (USACERL) demonstrated the use of this product in lead paint removal projects at several Army installations. In each case the resultant waste leached lead at a rate of less than five parts per million when tested in accordance with the toxicity characteristic leaching procedure (TCLP).

Our laboratory also conducted an investigation of the mechanism of the fixation of lead that occurs with Blastox[®]. We found no evidence that the product reacts in the dry state to stabilize the lead in the waste. Based on the laboratory data, we concluded that the stabilization reaction occurs in the wet state, during the TCLP test or when the material otherwise comes in contact with water to initiate a hydration reaction. A copy of the draft USACERL report is attached.

Army environmental reviewers of the draft report have expressed concern about the interpretation of TCLP results of waste generated during blasting with an abrasive incorporating Blastox[®]. In addition, there is some concern over the need to wet the waste prior to disposal to initiate the hydration reaction. If wetting is deemed necessary, is this considered hazardous waste treatment requiring a permit? As Mr. Rota suggested in his letter, we are contacting your office to seek an interpretation of the regulatory status of this product.

If I can be of any assistance, I may be contacted at (217) 373-6753. I look forward to your response.

Sincerely,

A handwritten signature in cursive script, reading "Vincent F. Hock".

Vincent F. Hock
Principal Investigator

Copies Furnished:

Susan Drozdz

~~Ken Rota~~

Should you have any additional questions or concerns regarding this letter, please contact Sharon Leitch of my staff. She may be reached at 617-573-9617.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gary B. Gosbee".

Gary B. Gosbee, P.E., Chief
Permits and State Programs Section

cc: Beverly Migliore, RIDEM

Waterworks International, Inc.
24 Fairfield St.
Maynard, MA 01754
March 1, 1995

Sharon
Joan
Please provide
response, in
my signature
Dtz
Cooney

Mr. Gary Gosbee
Rhode Island Waste Regulation Chief
U. S. Environmental Protection Agency
HRR-CAN 3
JFK Federal Building
Boston, MA 02203

Dear Sir:

This letter is a follow-up to our telephone conversation of February 27th. Waterworks has developed a proprietary process for the regeneration of spent sulfuric acid. We plan to build our first plant in East Providence, Rhode Island. This facility will accept spent sulfuric acid from generators throughout New England. In general, this spent acid has been diluted with water by the generator and may have picked up some additional metal or organic contaminants. In general, this material is currently neutralized with sodium hydroxide or some other caustic material at the generator's facility. The residual solids are sent off site for disposal and the water is typically sent to the local municipal sewer. Our plan is to collect the spent acid in containers, transport those containers to our facility and regenerate the acid.

It is our understanding that a spent acid regeneration facility is exempt from RCRA as detailed in 40CFR 261.4 (a)(7). We would like confirmation of this exemption. Additionally, we are currently preparing a Waste Analysis Plan for this facility. Our primary goal is to insure that we are not transporting hazardous waste to the facility. In that regard we intend to confirm that no hydrochloric or nitric acid has been mixed with the sulfuric acid. It is our understanding that such a mixture would be a hazardous waste and therefore not legally processed at our facility. We also will exclude "spent batteries" from our facility, although we may process spent acid from "spent batteries". Do we need to be concerned with TCLP materials defined in 40CFR 261.24? There are some materials, such as mercury, that are listed in Table 1 of 261.24 but that occur in virgin sulfuric acid. Additionally, there are some materials like lead, that are common contaminants in sulfuric acid. Do we or our customers, the generators of the spent acid, need to be concerned with these contaminants? Our understanding is that since the spent acid is being regenerated, that we would not fall under any other classification of hazardous waste as long as the material can be processed in our facility. Our Waste Analysis plan will address any wastes generated at our facility, specifically regarding land disposal of any such wastes. As generator of that waste, we recognize our responsibility is the same as any other generator.

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Regarding the transport of the spent acid to our facility, it is our understanding that the exemption under 40CFR 261.4(a)(7) also excludes us from any manifest requirements under 263.20. We recognize that there may be a manifest requirement as determined by state law, for example transport of spent acid from Massachusetts to our facility. Is our understanding on the Federal manifests correct?

Our intention is to open the facility this summer. Our goal is to have the Waste Analysis Plan complete in the near future and would therefore appreciate a rapid response to the above issues as well as an indication of any issues we may have overlooked. If you have questions, please call me at (508) 583-6285.

Sincerely,

A handwritten signature in black ink, appearing to read "Lawrence D. Conant", with a stylized flourish at the end.

Lawrence D. Conant
Chief Operating Officer

conditions such as loss of a set of black liquor evaporators or loss of a recovery furnace. When this occurs, the black liquor in the impoundment is accumulated in excess of what can be accommodated at the facility and so may not be recycled, or not be recycled for a long time.

In light of these uncertainties, the Agency is investigating further whether black liquor stored in an impoundment before recycling in the Kraft process is a waste. In addition, we note that black liquor that is disposed of and not recycled is a waste, and if hazardous, a hazardous waste. This includes black liquor that leaks, leaches, or overflows from an impoundment and is not recycled. Furthermore, the final rule states that black liquor stored before recycling remains subject to the rules on speculative accumulation. Thus, paper mills accumulating black liquor must show that they are recycling 75% of the amount on hand at the beginning of a one-year period.

In summary, today's final rule states that:

- Black liquor accumulating before recycle to the Kraft paper process is not a Subtitle C solid waste. At least for the present time, this exclusion includes black liquor that is stored in a surface impoundment before recycling. The person accumulating must show that the black liquor is not being accumulated speculatively, or the black liquor will be considered to be a waste;

Black liquor that is recycled in some other manner could be a waste and black liquor that is disposed of is a waste.

2. § 261.4(a)(7): *Spent Sulfuric Acid Used to Produce Virgin Sulfuric Acid.* Spent sulfuric acid is frequently used as a feedstock in the production of virgin sulfuric acid. It is normally reintroduced into the original sulfuric acid production process where sulfur values are recovered and absorbed into existing sulfuric acid. 45 FR 14487 n.30. Under the proposal, spent sulfuric acid recycled in this way was not considered to be a solid waste because it was used as an ingredient, used in a primary process, and was burned in an industrial furnace. See 48 FR 14483, 14487 n.30, 14488 n.31.

As discussed earlier (see Section E. above), some commenters questioned the regulatory status of spent materials that are reclaimed and then used as feedstocks. We indicated that normally the spent material would be considered to be a solid waste until it was reclaimed. However, we agree that our discussion of spent sulfuric acid at proposal (in footnote 30) created some confusion.

To eliminate any confusion, we are promulgating a specific exclusion stating that spent sulfuric acid recycled in this way is not a solid waste. As we explained at proposal, the spent sulfuric acid recycling process more closely resembles a manufacturing operation than a reclamation process. In addition, the operation is well established, and accounts for approximately 9% (in 1982) of the roughly 33 million tons of sulfuric acid produced annually. At least one state (California) has indicated by statute that spent sulfuric acid returned to the sulfuric acid production process is not a solid waste. EPA is therefore declaring explicitly that spent sulfuric acid returned to a sulfuric acid production process is not a solid waste. The acid is a hazardous waste if disposed (assuming it is corrosive or exhibits other hazardous waste characteristics), and could be a hazardous waste if recycled in some other manner (such as burning for energy recovery).

J. § 261.2(f): Burden of Proof in Enforcement Actions

EPA proposed that if respondents in enforcement actions raised a claim that a particular secondary material was not a solid waste (or was conditionally exempt from regulation) because it was recycled in a particular manner then they had the burden of proof to show that they were indeed recycling in that way. (Proposed § 261.2(d) and 48 FR 14492.) We are adopting this provision in the final regulation.

As discussed earlier in Section F, RCRA creates a broad remedial scheme to ensure that hazardous wastes are managed safely from cradle-to-grave. The regulatory framework envisaged for this problem extends to hazardous wastes being recycled, and normally includes any hazardous secondary material that is being recycled or that is accumulated with expectation of recycling.

Certain exceptions to this remedial scheme to exist. We think it appropriate, and the rule states explicitly, that the burden of proof (in the sense of both the burden of producing evidence and the burden of persuasion) is on the persons claiming that their hazardous secondary material is not a waste because it is within the terms of any of these exceptions. This provision, thus, restates the legal principle that parties claiming the benefits of an exception to a broad remedial statutory or regulatory scheme have the burden of proof to show that they fit the terms of the exception. See, e.g., *SEC v. Ralston Purina Co.*, 348 U.S. 119, 126 (1953) [exception to Securities Act registration requirements]; *U.S. v.*

First City National Bank of Houston, 386 U.S. 361, 366 (1967) (exception to merger provisions of Clayton Act); *Arnald v. Ben Knowsky, Inc.*, 361 U.S. 388, 393 (1960) (exception to Fair Labor Standards Act for retail sales); *Weyerhaeuser, Inc. v. Costle*, 590 F.2d 1011, 1040 (D.C. Cir. 1978) (burden of proof is on applicant for Agency-created fundamentally different factors variance).

Viewed another way, the regulations presume that hazardous secondary materials stored before recycling are hazardous wastes. The person accumulating can prove, however, that the materials are not wastes due to the manner of recycling (including the amount of material being recycled). These facts are within the special knowledge of the person accumulating the material. Presumptions of this type have been upheld consistently when they further interpret a remedial statutory purpose, guard against harm to public health and safety, and where the facts to rebut the inference are particularly within the knowledge of the other party. See *Beth Israel Hospital v. NLRB*, 437 U.S. 482, 493, 502 (1978); *U.S. v. General Motors Corp.*, 561 F.2d 923, 924 (D.C. Cir. 1977) (Leventhal J. dissenting in part).

Furthermore, this type of claim is an affirmative defense, for which it is appropriate that the person asserting the defense have the burden of proof. In addition, the facts underlying the recycling defense would be peculiarly within the knowledge of the party asserting the defense, a situation as noted above where it is appropriate for that party to have the burden of proving the issue. We thus disagree with those commenters claiming that the Agency lacked authority, or was ill-advised, to allocate a burden of proof in this regulation. Indeed, the Agency has allocated burdens of proof to respondents in other regulations that create an affirmative defense or an exception to a generally applicable principle. See § 122.42(n)(4) (permittee has burden of proof to establish the affirmative defense of upset); § 124.5 (National Pollutant Discharge Elimination System permit applicant has burden of persuasion that a permit authorizing a discharge of pollutants should be issued). This allocation of the burden of proof was affirmed in *American Petroleum Institute v. EPA*, 661 F.2d 340, 353, 354 (5th Cir. 1981).

There is no formal recordkeeping requirement in the regulation. However, persons must keep whatever records or other means of substantiating their claims that they are not managing a

3/14/95
LJG

Mr. Al Nardone
Massachusetts Department of Environmental Protection
Division of Hazardous Materials
One Winter Street, 7th Floor
Boston, MA. 02108

Dear Mr. Nardone:

This letter responds to the questions you presented in a recent telephone conversation with Jim Gaffey of my staff concerning the permit renewal of a Massachusetts Laidlaw facility. Specifically, you requested EPA - New England's (EPA) position on dealing with permit conditions for base-program areas not currently a part of the state's authorized RCRA program. Examples included Air Emission Standards for Process Vents, Equipment Leaks and Tanks, Surface Impoundments and Containers (Subparts AA, BB, and the new CC), and the Toxicity Characteristic Rule (TCLP). The theme of your inquiry center around an important policy issue which warrants clarification by EPA. Since this issue is relevant to all authorized State programs, a copy of this response is being forwarded to the five other New England state program offices.

EPA encourages the incorporation of statutory standards into new permits and permit renewals in those instances where the state has adopted applicable regulations into law. For situations where the state has not yet adopted regulations, EPA recommends drafting permits without addressing such provisions in the permit. EPA, however, acknowledges that each facility's hazardous waste management operations must be attended to on a case-by-case basis. Situations may occur which warrant specifying permits conditions in areas where the state is not authorized and no state law exists. In those situations, we recommend using your omnibus provision to ensure protection of human health and the environment.

EPA's position relative to permit conditions for base-program areas not currently a part of the state's authorized RCRA program is based on the following points:

1. As a result of HSWA, self-implementing facility standards imposed by statute apply to all permitted facilities. (Note; the "permit as a shield" for Subparts AA and BB expires on June 5, 1995; the effective date for Subpart CC.)
2. Self-implementing provisions incorporated into a permit will act as a shield for those self-implementing requirements.
3. Permit writers will be called upon to negotiate permit conditions in new areas which may become resource intensive and focus attention away from other key permitting issues.

EPA also recommends describing the position taken in handling this permitting issue in the administrative record of a draft permit for the benefit of the general public and the permittee. You may also add a general facility standards-type permit condition mandating the permittee to comply with all applicable self-implementing provisions imposed by RCRA.

Thank you for bringing this matter to our attention. If you have any comments on this or other permitting matters, please contact James Gaffey of my staff at (617) 223-5542.

Sincerely,

Gary Gosbee, Chief
Permits and State Programs Section
Waste Management Division

cc:

Dave Sattler, CT DEP
Stacy Ladner, ME DEP
Pam Sprague, NH DES
Beverly Migliori, RI DEM
Steve Simoes, VT DEC
EPA RCRA State Coordinators
Fred Friedman, LAI



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

file

February 27, 1995

Mr. Donald B. Sargent, Manager
Safety, Chemical & Environmental Program
I B M Corporation
Department 723
Building 966-2
1000 River Street
Essex Junction, Vermont 05452

Dear Mr. Sargent:

This letter is in response to your inquiry on the effect of the new land disposal restrictions (LDR) on IBM. As you know, the new LDRs were promulgated in the September 19, 1994 Federal Register and became effective on December 15, 1994. The regulations are applicable to the newly identified organic toxicity characteristic wastes, D012 - D043, which must meet the treatment standards prior to land disposal. IBM has indicated that D021, D022, D029, D039, D040, and D043 may be handled in the soil treatment facility.

Since IBM considers the contaminated soils as a toxic characteristic (TC) "D" waste, IBM may treat these wastes on-site in a tank or container (such as the vapor extraction system). The Universal Treatment Standards also require generator of a TC waste to determine whether any underlying constituents are present as defined at 40 CFR §268.2. If so, the treatment standards identified for these constituents must be met to satisfy the requirements of RCRA Section 3004(m) prior to on-site or off-site land disposal of this waste. A notification to EPA or the authorized state is required if IBM decides to send the wastes off-site to a Subtitle D disposal facility. In addition, the carbon canisters also need to meet the LDR standards prior to land disposal.

If you have any questions with this letter, please feel free to call me at (617) 573-5776 or Ken Rota, the LDR Specialist, at (617) 573-5759.

Sincerely,

David Lim

ME, NH & VT Waste Regulation Section

cc: Ken Rota, EPA
Ray McIntosh, IBM





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

L. Goshell

January 30, 1995

Mr. Kerry R. Tull
ATEC Associates, Incorporated
55 Accord Park Drive
Rockland, MA 02370

COPY

Dear Mr. Tull:

This letter is in response to your November 3, 1994 letter requesting EPA-New England's interpretation of treatment of lead contaminated soil at a site at 250 Elm Street in Dedham, MA.

As stated in your letter, EPA would consider soil that is contaminated with lead to be a hazardous waste if it fails the Toxicity Characteristic Leaching Procedure (TCLP).

As described in 51 FR 10168, generators are allowed to treat hazardous waste in tanks or containers without a permit as long as the generator complies with the accumulation requirements of 40 C.F.R. § 262.34 and Subparts I and J of 40 C.F.R. § 265 (standards for tanks and containers). If treatment at this site is conducted in accordance with the requirements previously cited, is being conducted in a tank or container and is completed within 90 days, then it would meet this permit exemption. The definitions of "tank" and "container" can be found at 40 C.F.R. § 260.10.

The second issue which you propose is the "stockpiling" of excavated soils prior to treatment. Stockpiling of hazardous waste prior to treatment would be considered storage in a waste pile, as set forth in Subpart L of 40 C.F.R. § 264. Any treatment or storage of hazardous waste in a waste pile would be considered a federally regulated activity which requires a permit.

EPA-New England appreciates your attempt to obtain accurate regulatory information prior to the initiation of excavation activities at this site. Please refer to the regulations and Federal Register notices cited above to obtain detailed information regarding the regulatory status of the proposed process.



If you have any further questions, feel free to call Lisa Papetti
of my staff at (617) 573-5745.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gary B. Gosbee".

Gary B. Gosbee, P.E., Chief
MA & RI Waste Regulation Section

cc: Lisa Papetti, EPA
Michael Conway, Retek